Abstract

Title: The anthopometric relation to bench press performance and sticking region

Objectives: The aim of the thesis is to determine the influence of anthropometric parameters on the performance in bench press and its critical phase of motion. Another objective of this work is to determine the differences of influence anthropometry between 1 RM, 4 RM, 8 RM and 12 RM as well as anthropometric impact on the area occurring before the critical phase of motion and on the area after the critical phase of motion.

Methods: This is a quantitative research based on the comparison of measured anthropometric parameters with performance and kinematics by bench press analysis. For experimental methods it was used laboratory conditions and it was used methods of analysis to evaluate the acquired data.

Results: The results of the work show that anthropometric parameters affect the performance especially at 1 RM and 12 RM. Overall, the forearm has the greatest impact, reaching a strong negative correlation r = -0.69. Lower arm abduction at 12 RM has a large correlation coefficient r = 0.68, and the chest ratio with upper limb length has a mean positive correlation r = 0.55 for 1 RM and 12 RM. The influence of anthropometry on the critical phase of motion has not been confirmed. Only the correlation between anthropometry and the duration of the area after the critical phase of motion was found, which has come up with a positive correlation between body height, height of the overweight and the length of the upper arm.

Keywords: bench press, anthropometry, sticking region